

Minutes of November 25, 2008 Subgroup on Research meeting

Northern Prairie Wildlife Research Center, USGS

Attending: Carol Peterson (NRCS), Ryan Odenbach (SCD), Dennis Jorde (USGS – NPWRC), Mike Ell (ND Department of Health), Aaron Larsen (ND Department of Health), Kim Hanson (USFWS – Arrowwood), Gene Van Eeckhout (NDGFD), Bob Martin (COE), Sally L. Benjamin (USGS – NPWRC). Joining via conference call: Gregg J. Wiche, Karen Ryberg, and Robert F. Lundgren (North Dakota Water Science Center – USGS), Mark T. Anderson and Dan Driscoll, (South Dakota Water Science Center)

Synopsis of Discussion:

Current research / monitoring project: The group discussed the effect of drawdowns on the Reservoir and on downstream water quality, and state of knowledge with relationship to the water management on the watershed. The discussion focused on areas of missing data and/or in need of additional research or analysis. It included the water quality effects of both the by-pass on the Arrowwood Refuge and drawdowns on the Reservoir. The group discussed the need to better understand the role of water level management at the Arrowwood National Wildlife Refuge on water quality in the Jamestown Reservoir. There was discussion of the need for another gaging station between the refuge and the headwaters.

There were a number of questions related to the Bureau of Reclamation's five-year data collection (see Action Items) and of when the data collection will end. Bob Lundgren and Karen Ryberg, ND Water Science Center, update the group on existing and on-going data collection efforts of USGS. Karen also provided a very informative overview of water quality sampling data for twenty-five years at Arrowwood. The report spans from 1987 through the present, with a break between 1993 and 1999. This includes a very dry period and a wet/normal period. Karen provided an overview and informed the group that the report will be published in the very near future. Gregg Wiche promised to provide a summary of the work that his staff has done related to the Arrowwood by-pass (see Action Items). Karen has been invited to present at the Partnership meeting on January 27, 2009 (See below).

Concern was expressed about future monitoring, at least through 2009. There's a need to continue funding of gaging stations, including water quality analysis, and the need to analyze data that's collected. Discussion also touched back on the goal of the BR monitoring program and possibility that there's a need for another year of data collection. It was confirmed that, barring a disaster in the budget, there'd be data collection in 2009, including collection of biological data in the pools. Given that, it was raised that sampling on the Reservoir might need to continue for another year as well.

There was an update of the work ND DoH is funding on the AnnAGNPS (Annualized Agricultural Non-Point Source Pollution Model) model. The loss of CRP and the value of the data collection already completed on the watershed, particularly if another year's data is collected in 2009, is another area for possible analysis. The watershed modeling will be done on time, with expected completion mid-Summer of 2009. There was some discussion of the modeling effort for the upper Pipestem Creek watershed funded by ND Forest Service and some of the issues with the way data layers had been defined, grouped or labeled.

The timing of the reports and other work that Ryan Odenbach's committed to producing was discussed in light of the general agreement that another year of monitoring is important. It was concluded that there's no need to hold up any work, including reports, but that additional information will be useful and can be integrated in the future.

National Fish Habitat Action Plan: There was an update on the National Fish Habitat Action Plan and the Candidate Partnership (The Great Plains Prairie Fish Habitat Partnership) that encompasses the James River (The Partnership includes the following major river systems: the Missouri, Yellowstone, Platte, Kansas, and Red River of the North). The James River has been identified as a medium priority in this effort. Higher priority waters include the Little Missouri (due to energy development and the loss of CRP) and the Pembina and Turtle Rivers (due to the degree of biodiversity). For information on the Great Plains Prairie Fish Habitat Partnership, see Prairiefish.org.

Coordinating water management: There was a good discussion of the coordination mechanisms that have been established between water managers in the headwaters region and downstream. The organization meets in spring (April) and will probably meet in Jamestown next year. There was also discussion of the potential for coordination downstream on shared research questions that might cross into South Dakota.

Research Topics:

- How does water quality/nutrient loading affect Arrowwood National Wildlife Refuge and the Jamestown Reservoir's ecological function?
- How does/will water management on Arrowwood Refuge affect water quality and nutrient loading to Jamestown Reservoir?
- What are the impacts of nutrient enrichment on wetland vegetation (growth, composition), particularly in Arrowwood Refuge?
- What are the predominant nutrient/sediment sources in the upper James River watershed?
- Value of existing data on water quality and work in land use in the watershed to demonstrate the effects of recent loss of CRP in Stutsman County, particularly with another year of monitoring

Action Items:

- Questions from the group *for Rick Nelson*: What are the primary goals, objectives and/or purpose of the cooperative BR/USGS refuge monitoring program? How does the current monitoring effort relate to historic monitoring and to the analysis that Karen Ryberg is doing? Does the BR 5-year study continue through 2009? The feeling is that another year of normal runoff would give good data and it's particularly important since this was the first year that Arrowwood had control over all the structures. There is the possibility of NDG&F providing nonfederal match. [Sally Benjamin and Rick Nelson have a scheduled discussion on Wednesday, November 26th]
- Questions from the group *for Gregg Wiche's staff*: What would it cost to establish a gaging station between the refuge and the headwaters?
- *Gregg Wiche* will provide a summary of the ND Water Science Center work related to the Arrowwood by-pass.
- *Karen Ryberg* is invited to the next Partnership meeting as a presenter.

Next Partnership Meeting: January 27, 2009

(The next Research subgroup meeting will be scheduled at that meeting)